GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:2470
ANSWERED ON:07.08.2001
ACHIEVEMENTS BY BIOTECHNOLOGY
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

the details of the major achievements in the realm of Bio-technology in the country ?

Answer

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

Important achievements in biotechnology have been mostly related to the areas of agriculture, health care and environment. Creation of advanced infrastructure facilities, 61 biotechnology teaching programmes, and 56 bioinformatic centres have provided major impetus for the research, development and commercialisation of biotechnology in the country. Transgenics under advanced field trials with biotic and abiotic resistance and enhanced nutritional quality, specially covering crops like cotton, mungbean, mustard, rice, potato, tomato, brinjal etc. aim at the genetic enhancement of the planting material for the farmers. Integrated nutrient management projects for biofertilizers and biocontrol agents have trained thousands of farmers all over the country through large scale field demonstrations of these technologies and new packages. An immuno-modulatory therapeutic leprosy vaccine has already been commercialised. Diagnostic kits for HIV, hepatitis A, dengue and for many other diseases have been transferred to the industry. Biotechnological packages for environmental protection and biodiversity conservation have been successfully demonstrated and given to industry for large scale application. Twenty eight technology packages are being processed for commercialisation by different industries which include vaccines, diagnostics, tissue cultured plants, biofertilizers, biopesticides and bioremediation technologies etc. Plant tissue culture has become an important industrial venture , specially with the establishement of 2 micropropagation technology parks and many hardening units in the country. Thirty two patent applications have been filed including five in the foreign countries. Two US patents and seven Indian patents have been granted. Biotechnology based programmes for societal development which include training, R&D projects, establishment of biovillages, biotechnology parks etc., have benefitted about 52,000 families all over the country. Sixteen genetic counselling clinics have helped in identifying patients with genetic disorders. Plant, animal and microbial genomics have been the priority. The autonomous institutions of the department and the Public Sector Undertaking, Bharat Immunologicals and Biologicals Corporation Ltd. (BIBCOL) have worked with clear milestones and thei achievements are significant in the areas of basic research and product development. The number and quality of publications have significantly increased in biology. The international collaboration with both developed and developing countries has facilitated further research and product development. The Department of Biotechnology (DBT), Council of Scientific and Industrial Research (CSIR) Indian Council of Medical Research (ICMR), Indian Council of Agricultural Research (ICAR), Department of Science and Technolog (DST) and the University Grants Commission (UGC) have worked together for providing a systemic impetus to the growth of this frontline area of science. Recognising the enormous potential of the field, many State Governments have also set up new institutional structures for the development and application of biotechnology.

The activities of the department and its achievements are brought out regularly in the Annual Reports which are placed before the Parliament. The information can also be accessed on the department`s websites: www.dbtindia.org, www.dbtindia.nic.in and www.dbtindia.nic.in/ebc.